

Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims:

1. (Previously Presented) A position indicator, comprising:
a position indicator display and mechanism;
a polymer housing that includes the position indicator display and mechanism, wherein a ring formed on an inner surface of the polymer housing is in contact with at least part of the position indicator display and mechanism;
a one-piece clear polymer cover configured to enclose the position indicator display and mechanism in the polymer housing; and
a hand-operated fastening device that secures the one-piece clear polymer cover to the polymer housing such that an interaction between the polymer housing and the one-piece clear polymer cover creates a seal between the one-piece clear polymer cover and the polymer housing.
2. (Previously Presented) The position indicator of claim 1 wherein:
the hand-operated fastening device includes a latch, and
the latch secures the one-piece clear polymer cover to the polymer housing such that the one-piece clear polymer cover can be opened without the use of tools.
3. (Previously Presented) The position indicator of claim 30 wherein the hinge includes a first portion that is integrated with the polymer housing and a second portion that is integrated with the one-piece clear polymer cover.
4. (Previously Presented) The position indicator of claim 1, further comprising:
an input shaft having an angular velocity;

wherein the position indicator display includes a pointer to indicate a position of a tap changer and the pointer has an angular velocity.

5. (Previously Presented) The position indicator of claim 23 wherein the drive mechanism includes a Geneva-type mechanism.

6. (Previously Presented) The position indicator of claim 23 wherein a resulting motion of the pointer includes a dwell.

7. (Previously Presented) The position indicator of claim 23 wherein the drive mechanism includes an interchangeable output drive component to change rotation of the pointer relative to rotation of the input shaft.

8. (Previously Presented) The position indicator of claim 23 wherein the drive mechanism includes an output drive component and the pointer is integrated with the output drive component.

9. (Previously Presented) The position indicator of claim 23 wherein the drive mechanism includes an output drive component and the position indicator further comprises a maximum position pointer actuator that is integrated with the output drive component.

10. (Previously Presented) The position indicator of claim 23 wherein the drive mechanism includes an output drive component and the position indicator further comprises a limit switch triggering cam that is integrated with the output drive component.

11. (Previously Presented) A position indicator, comprising:
a position indicator display and mechanism, the position indicator display comprising:
a main position indicating assembly, and

a modular maximum position indicating subassembly that is secured to the main position indicating assembly with a hand-operable fastener;

a polymer housing to house the position indicator display and mechanism; and

a one-piece clear polymer cover enclosing the position indicator display and mechanism in the polymer housing.

12. (Original) The position indicator of claim 11 wherein the hand-operable fastener includes a thumbscrew.

13. (Original) The position indicator of claim 11 wherein the modular maximum position indicating subassembly includes a polymer base.

14. (Previously Presented) The position indicator of claim 11 wherein the position indicator mechanism includes a drive mechanism having a concentric circular gap, wherein the modular maximum position indicating subassembly fits inside the concentric circular gap in the drive mechanism.

15. (Original) The position indicator of claim 11 wherein the modular maximum position indicating subassembly is configured to be secured to the main position indicating assembly without tools.

16. (Original) The position indicator of claim 11 wherein the modular maximum position indicating subassembly includes a solenoid that is capable of receiving a quick connecting electrical connector.

17. (Previously Presented) A position indicator, comprising:

a position indicator display and mechanism;

a polymer housing to house the position indicator display and mechanism;

a one-piece clear polymer cover enclosing the position indicator display and mechanism in the polymer housing;

a limit switch; and

a one-piece limit switch adjuster that holds the limit switch and further includes integrated functionality to constrain the one-piece limit switch adjuster in the polymer housing without fasteners.

18. (Previously Presented) The position indicator of claim 17 wherein the one-piece limit switch adjuster includes a molded polymer part.

19. (Previously Presented) The position indicator of claim 17 further comprising a retaining ring, and wherein the one-piece limit switch adjuster includes an integrated tab that mates with a notch on the retaining ring to hold the one-piece limit switch adjuster in place in the polymer housing.

20. (Previously Presented) The position indicator of claim 17 wherein the polymer housing includes a channel and the one-piece limit switch adjuster slides in the channel in the polymer housing.

21. (Previously Presented) The position indicator of claim 20 wherein the one-piece limit switch adjuster slides in the channel in the polymer housing without a bearing or a hinge.

22. (Previously Presented) The position indicator of claim 17 wherein the one-piece limit switch adjuster includes a rocker-type snap switch.

23. (Previously Presented) The position indicator of claim 4 wherein the position indicator mechanism includes a drive mechanism connected to the input shaft and to the pointer.

24. (Previously Presented) The position indicator of claim 23 wherein the drive mechanism is non-linear such that the angular velocity of the input shaft is not directly related to the angular velocity of the pointer.

25. (Previously Presented) The position indicator of claim 1 further comprising a compliant gasket positioned within a groove in the polymer housing such that the gasket interfaces with a circumferential lip provided around the one-piece clear polymer cover to provide the seal between the polymer housing and the cover.

26. (Previously Presented) A position indicator, comprising:
a position indicator display and mechanism, wherein the position indicator mechanism includes a one-piece limit switch adjuster;
a polymer housing to house the position indicator display and mechanism; and
a one-piece clear polymer cover enclosing the position indicator display and mechanism in the polymer housing.

27. (Previously Presented) A position indicator, comprising:
a position indicator display and mechanism, wherein the position indicator mechanism includes a modular maximum position indicator;
a polymer housing to house the position indicator display and mechanism; and
a one-piece clear polymer cover enclosing the position indicator display and mechanism in the polymer housing.

28. (Previously Presented) The position indicator of claim 23 wherein the pointer is mounted on the drive mechanism.

29. (Previously Presented) The position indicator of claim 1, wherein the one-piece polymer cover is secured to the polymer housing at a single access point.

30. (Previously Presented) The position indicator of claim 1, further comprising a hinge connected to the one-piece clear polymer cover and the polymer housing, and wherein the one-piece clear polymer cover is configured to rotate about the hinge.

31. (Previously Presented) The position indicator of claim 3, further comprising a removable pin configured to join the first and second portions of the hinge.

32. (Previously Presented) A position indicator, comprising:
a position indicator display and mechanism, wherein the position indicator mechanism includes a limit switch adjuster;
a polymer housing that includes the position indicator display and mechanism, wherein a ring formed on an inner surface of the polymer housing is in contact with at least part of the position indicator display and mechanism; and
a one-piece clear polymer cover configured to enclose the position indicator display and mechanism in the polymer housing.

33. (Previously Presented) The position indicator of claim 32, wherein the limit switch adjuster is a one-piece limit switch adjuster.

34. (Previously Presented) A position indicator, comprising:
a position indicator display and mechanism;
a polymer housing to house the position indicator display and mechanism;
a one-piece clear polymer cover configured to enclose the position indicator display and mechanism in the polymer housing;
a limit switch; and
a limit switch adjuster that holds the limit switch and further includes integrated functionality to constrain the limit switch adjuster in the polymer housing without fasteners.

35. (Previously Presented) The position indicator of claim 34, wherein the limit switch adjuster is a one-piece limit switch adjuster.

36. (Previously Presented) The position indicator of claim 34, wherein the limit switch adjuster includes a molded polymer part.

37. (Cancelled)